

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listing, of claims in the application.

Claims

1. (Currently amended) An infrared (IR_T) reflective flake (1) comprising an infrared reflective core flake (4) and an infrared transparent material (2,6) which is coated on some or all of the surface of the core flake (4) wherein the ~~reflector~~ reflective core (4) flake has a thickness of less than $0.2\ \mu\text{m}$.
2. (Currently amended) An infrared (IR_T) reflective flake (1) as claimed in claim 1 wherein the core (4) flake has a DC electrical resistivity in the range 0.1 to $50\ \Omega\text{cm}^{-1}$.
3. (Currently amended) An infrared (IR_T) reflective flake (1) as claimed in claim 1 wherein the core (4) flake is aluminium and has a thickness in the range 0.03 to $0.04\ \mu\text{m}$.
4. (Currently amended) An infrared (IR_T) reflective flake (1) as claimed in claim 1 wherein the core (4) flake is chromium and has a thickness in the range 0.08 to $0.12\ \mu\text{m}$.
5. (Currently amended) An infrared (IR_T) reflective flake (1) as claimed in ~~any preceding~~ claim 1 wherein the core flake (4) has a surface texture of less than $1\ \mu\text{m}$ and and depth to pitch ratio of less than 0.5 .
6. (Currently amended) An infrared (IR_T) reflective flake (1) as claimed in claim 5 wherein the texture is in the range 0.2 to $0.4\ \mu\text{m}$.
7. (Currently amended) An infrared (IR_T) reflective flake (1) as claimed in ~~any preceding~~ claim 1 ~~wherein the flake (1) has~~ having a diameter of 10 to $100\ \mu\text{m}$.
8. (Currently amended) An infrared (IR_T) reflective flake (1) as claimed in claim 7 wherein the diameter is in the range $10 - 50\ \mu\text{m}$.
9. (Currently amended) An infrared (IR_T) reflective flake (1) as claimed in claim 8 wherein the diameter is in the range $30 - 40\ \mu\text{m}$.

10. (Currently amended) An infrared (IR_T) reflective flake (4) as claimed in ~~any preceding~~ claim 1 wherein the infrared transparent material (~~2, 6~~) comprises a non-polar or weakly polar organic polymer that optionally contains a coloured dye or other coloured material.
11. (Currently amended) An infrared (IR_T) reflective flake (4) as claimed in claim 10 wherein the infrared transparent material(~~2, 6~~) thickness is in the range 0.2 to 2 μm .
12. (Currently amended) An infrared (IR_T) reflective flake (4) as claimed in claims 1-11 wherein the infrared transparent material (~~2, 6~~) comprises an inorganic film that optionally contains a coloured dye or other coloured material.
13. (Currently amended) An infrared (IR_T) reflective flake (4) as claimed in ~~any preceding~~ claim 1 wherein the core (~~4~~) flake has a thickness of less than 1 nm.
14. (Currently amended) An infrared (IR_T) reflective flake (4) as claimed in claim 13 wherein the DC resistivity is less than $10 \Omega\text{cm}^{-1}$.
15. An infrared (IR_T) reflective flake (4) as claimed in ~~any of claims 10, 11 or 12~~ 1 wherein the core (~~4~~) flake comprises indium or fluorine doped tin oxide.
16. (Currently amended) An infrared (IR_T) reflective flake (4) as claimed in ~~any of claims 13 to 15~~ 1 wherein the infrared transparent material (~~2, 6~~) completely encapsulates the core material.
17. (Currently amended) A paint formulation comprising infrared (IR_T) reflective flakes (~~4~~) according to ~~any of~~ claims 1-16.
18. (Currently amended) A varnish formulation comprising infrared (IR_T) reflective flakes (~~4~~) according to ~~any of~~ claims 1-16.
19. (Cancelled)